

QUICK TIP!

Hey Kids! Time for a super fun math lesson, courtesy of Math Madness!

EXPONENTS

Powers of 10 are often written as exponents. For example, the value 1000 is equal to $10 \times 10 \times 10$. This can also be written as 10^3 . The three to the upper right of the number is called an exponent. It means "this number multiplied by itself three times."

Values less than 1 can also be written as exponents. In this case, we put a - sign before the exponent. For example, the value $1/1000 = 1/10 \times 1/10 \times 1/10$. This can also be written as 10^{-3} .

Finally, any number to the power of zero is always equal to 1.

$$1000 = 10 \times 10 \times 10 = 10^3$$

$$100 = 10 \times 10 = 10^2$$

$$.001 = \frac{1}{1000} = \frac{1}{10 \times 10 \times 10} = 10^{-3}$$

**TRY IT: CONVERTING TO EXPONENTS!**

Convert each value from decimal notation to a power of 10 using exponents

$$.01 = \quad 10 = \quad .001 = \quad 10,000 =$$

$$1 = \quad .00001 = \quad 1,000,000 = \quad .1 =$$

TRY IT: CONVERTING FROM EXPONENTS!

Convert each exponent to decimal notation

$$10^4 = \quad 10^{-2} = \quad 10^6 = \quad 10^1 =$$

$$10^{-1} = \quad 10^7 = \quad 10^0 = \quad 10^{-4} =$$